

Remarks

Claims 1-13 and 15 have been cancelled so the rejections thereof are moot. The examiner has rejected claim 16 under 35 U.S.C. 103 (a) as being unpatentable over Watanabe et al, U.S. Patent 6,614,113 B2, hereinafter Watanabe et al, in view of McCormick, U.S. Patent 6,706,622 B1, hereinafter McCormick. This rejection is not thought to be well taken. First, it should be noted that this amendment merely makes claim 16 independent rather than dependent, and neither eliminates nor adds any limitations. Therefore, this amendment neither enlarges nor restricts the scope of claim 16 as presently constituted, except for the limitation of claim 13.

With respect to the rejection of claim 16 as unpatentable over Watanabe et al in view of McCormick, it is submitted that the examiner is picking and choosing from various references without any reference suggesting the combination, nor what the combination would look like. For example, McCormick does teach a dual barrier layer of Ta/TaN and also a dual layer of Ni, and Au, but he does not suggest the dual layer of Ni and Au should cover the edge of the copper 20. Moreover, Watanabe et al do not indicate any reason for the covering of the edge of the copper layer with a dual layer of Ni and Au. Indeed, Watanabe et al teach that the top layer be formed of Au. Thus, Watanabe et al teach that the Au layer cover the Ni layer, not that the Ni layer *and* the gold layer should cover the copper layer. Accordingly, there is no teaching of how to combine the references in the prior art; this teaching comes only from the applicants' teaching.

It is not enough that one may modify a reference in view of a second reference, but rather it is required that the second reference suggest modification of the first reference and not merely provide the capability of modifying the first reference.

The CAFC stated in In re Piasecki, 745 F.2d 1468, 223 USPQ 785, 788 (Fed. Cir. 1984) the following:

"The Supreme Court in Graham v. John Deere Co., 383 U.S. 1 (1966), focused on the procedural and evidentiary processes in reaching a conclusion under Section 103. As adapted to ex parte procedure, Graham is interpreted as continuing to place the "burden of proof on the Patent Office which requires it to produce the factual basis for its rejection of an application under sections 102 and 103". Citing In re Warner, 379 F.2d 1011, 1020, 154 USPQ 173, 177 (CCPA 1967)."

The law is quite clear that in order for a claimed invention to be rejected on obviousness, the prior art must suggest the modifications sought to be patented; In re Gordon, 221 U.S.P.Q. 1125, 1127 (CAFC 1984); ACS Hospital System, Inc. v. Montefiore Hospital, 221 U.S.P.Q. 929, 933 (CAFC 1984). The foregoing principle of law has been followed in Aqua-Aerobic Systems, Inc. v. Richards of Rockford, Inc., 1 U.S.P.Q. 2d, 1945 (D.C. Illinois 1986). In the Aqua-Aerobic's case, the Court stated that the fact that a prior reference can be modified to show the claimed invention does not make the modification obvious unless the prior reference suggests the desirability of the modification. The CAFC in the case of In re Gorman, 18 U.S.P.Q. 2d (CAFC 1991) held at page 1888:

"When it is necessary to select elements of various teachings in order to form the claimed invention, we ascertain whether there is any suggestion or motivation in the prior art to make the selection made by the applicant [citation]. 'Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination [citations]. . . .

The references themselves must provide some teaching whereby the applicant's combination would have been obvious."

Further, the CAFC, in In re Oetiker, 24 U.S.P.Q. 2nd 1443, 1445 (CAFC 1992) held:

There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge can not come from the applicant's invention itself.

Most significantly, the CAFC in the case of In re Dembiczak, 50 U.S.P.Q.2nd 1614 (CAFC 1999) held at 1617:

...(examiner can satisfy burden of obviousness in light of combination 'only by showing some objective teaching [leading to the combination]');

Thus, it is clear that where an individual reference does not teach the entire invention, then the modification which the invention represents must be suggested and motivated by some other reference through some objective teaching and cannot come from the application itself, which is not the case here.

Claim 17 has been rejected under 35 U.S.C. 103 (a) over Watanabe et al in view of Chen et al, U.S. Patent 6,649,507, hereinafter Chen et al. This rejection is not thought to be well taken. First, claim 17 is dependent upon claim 16 (as amended) and Chen et al do not overcome the deficiencies note above. Moreover, just because Chen et al utilize an Al pad in their embodiment, such use does not make it suitable for applicants' invention, and there is nothing in either reference that would suggest its suitability. Thus, for this additional reason, claim 17 is believed to be allowable.

Claim 18, which has been rejected under 35 U.S.C. 103 (a) as unpatentable over Watanabe et al in view of Mis et al, U.S. Patent 6,762,122, hereinafter Mis et al, is dependent upon claim 16 and, for the same reasons, is believed to be allowable. Moreover, claim 18 requires the ball bond be wholly within the wall defined by the conductive material. This is not shown by any of the references. (It should be noted that the word "wholly" has been inserted in this claim. This is intended to make explicit what was implicit, and is not intended to change the scope of the claim. Moreover, this is not new matter since this is clearly shown in Figure 8.


Claim 19 has been rejected under 35 U.S.C. 103 (a) as being unpatentable over Watanabe et al in view of Mis et al and further in view of Moyer et al, U.S. Patent 6,620,720, hereinafter Moyer et al. This rejection is not thought to be well taken. First, claim 19 is dependent upon claim 16 and, for the same reasons, is believed to be allowable. Moreover,

while Moyer et al suggest the use of wire bonding using Au, the reference is silent with respect to the invention of applicants.

In view of the above, it is believed that each of the claims now in the application is distinguishable one over the other and over the prior art. Therefore, reconsideration and allowance of the claims now in the application are requested.

Respectfully submitted,

Date: 7/19/05



William N. Hogg (Reg. No. 20,156)
Driggs, Lucas, Brubaker & Hogg Co., L.P.A.
CUSTOMER NO. 26681

WNH:cg